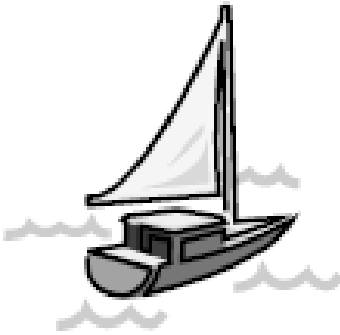


# Buoyant Boats

Lesson Title: Buoyant Boats

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Name: \_\_\_\_\_



**Objective:** To design and build a boat with the greatest buoyant force.

In this activity, you will use any available materials (from at school and/or at home) to construct a boat with the greatest possible buoyant force. The boat will be tested by floating the boat and adding mass; the boat that supports the greatest load wins.

## Here are the rules of the game:

- The **maximum** dimensions of your boat are 2 x 3 x 6 in any combination of length, width and height.
- The test for your dimensions will be for your boat to fit COMPLETELY inside a box with dimensions *just over* 2 x 3 x 6 inches.
- Mass (weight) will be added to your boat until it sinks.
- You must plan what materials you will use to construct your ship and explain why you think you will be successful
- We will measure the mass and volume of your ship and calculate its density as part of the lab.
- Your boat MUST BE COMPLETED by the next Friday class—you must sign up in ADVANCE if you plan to work with a group.

## Materials:

- You may use any materials that you can find, but your entire boat MUST fit inside a box that measures *approximately* 3 1/8 x 2 1/8 x 6 1/8 inches.
- Consider what you know about the *types* of materials that float
- Consider the shape of your boat for **stability** and design it in a way that it won't capsize
- Leave room for cargo—your success will be determined by how much extra cargo you can carry
- You must provide a schematic (drawing) of how you plan to build your boat.
- Your boat MUST BE COMPLETED by the next class—you must sign up to work in groups IN ADVANCE of the day it is due.